

ABSTRACT OF THE DISCLOSURE

A catheter for diagnosing and performing an interventional procedure on tissue has an elongated catheter shaft, and optical fibers, extending through the catheter shaft, for transmitting light to tissue located at a distal end of the catheter and conveying light back from the tissue for analysis by a spectroscopic diagnosis system to determine whether an interventional procedure should be performed on the tissue. An interventional device is located at the distal end of the catheter for engaging tissue diagnosed by the spectroscopic diagnosis system in order to perform the interventional procedure on the tissue. An assembly for imaging and performing an interventional procedure on tissue has an endoscope in combination with an endoscopically insertable catheter having an ultrasound imaging device for imaging a tissue structure located at a distal end of the endoscope so as to enable the depth of penetration of the tissue structure to be displayed, and an endoscopically insertable interventional device for engaging the tissue structure imaged by the ultrasound imaging device.